i

C 590
O 505
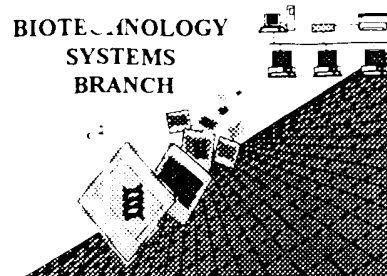
RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _09/911,826_

Source: _OIPE_

Date Processed by STIC: _8/7/2001_

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: **patin21help@uspto.gov** or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: **patin3help@uspto.gov** or phone 703-306-4119 (R. Wax)

TO **REDUCE** ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:
http://www.uspto.gov/web/offices/pac/checker

ERROR DETECTED | SUGGESTED CORRECTION | SERIAL NUMBER: 09/911,826

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFT

1 _____ Wrapped Nucleics
Wrapped Aminos

The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2 _____ Invalid Line Length

The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 _____ Misaligned Amino
Numbering

The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4 _____ Non-ASCII

The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5 _____ Variable Length

Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 _____ PatentIn 2.0
"bug"

A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7 _____ Skipped Sequences
(OLD RULES)

Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 _____ Skipped Sequences
(NEW RULES)

Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
<210> sequence id number
<400> sequence id number
000

9 _____ Use of n's or Xaa's
(NEW RULES)

Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 _____ Invalid <213>
Response

Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

11 _____ Use of <220>

Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12 _____ PatentIn 2.0
"bug"

Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 _____ Misuse of n

"n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/911,826

DATE: _____
TIME: 1_:57:__

Input Set : A:\sequence-as filed.txt
Output Set: N:\CRF3\08072001\I911826.raw

```
  3 <110> APPLICANT: HSC Research Development Limited Partnership et al.
  5 <120> TITLE OF INVENTION: RAS Activator Nucleic Acid Molecules, Polypeptides and
  6        Methods of Use
  8 <130> FILE REFERENCE: 1786/0019
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/911,826
Q--> 11 <141> CURRENT FILING DATE: 2001-07-20
 13 <150> PRIOR APPLICATION NUMBER: 2,259,630
 14 <151> PRIOR FILING DATE: 1999-01-20
 16 <160> NUMBER OF SEQ ID NOS: 27
 18 <170> SOFTWARE: PatentIn Ver. 2.1
```

ERRORED SEQUENCES

Does Not Comply
Corrected Diskette Needed

```
  646 <210> SEQ ID NO: 4
  697 <211> LENGTH: 186
  698 <212> TYPE: PRT
  699 <213> ORGANISM: Homo sapiens
  701 <400> SEQUENCE: 4
  702 Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala Ala Ala Leu
  703  1               5                  10                  15
  705 Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ser Gly Gly Lys Asp
  706              20                  25                  30
  708 Val Ser Ala Glu Ala Glu Ser Ser Ser Met Val Pro Val Thr Thr Glu
  709          35                  40                  45
  711 Glu Ala Lys Pro Val Pro Met Pro Ala His Ile Ala Val Thr Pro Ser
  712      50                  55                  60
  714 Thr Thr Lys Gly Leu Ile Ala Arg Lys Glu Gly Arg Tyr Arg Glu Pro
  715  65                  70                  75                  80
  717 Pro Pro Thr Pro Pro Gly Tyr Val Gly Ile Pro Ile Ala Asp Phe Pro
  718                  85                  90                  95
  720 Glu Gly Pro Cys His Pro Ala Arg Lys Pro Pro Asp Tyr Asn Val Ala
  721              100                 105                 110
  723 Leu Gln Arg Ser Arg Met Val Ala Arg Pro Thr Glu Ala Pro Ala Pro
  724          115                 120                 125
  726 Gly Gln Thr Pro Pro Ala Ala Ala Ala Ser Arg Pro Gly Ser Lys Pro
  727      130                 135                 140
  729 Gln Trp His Lys Pro Ser Asp Ala Asp Trp Arg Leu Ala Pro Phe Gln
  730  145                 150                 155                 160
  732 Ala Ala Ser His Ser Gly Thr Ser Pro Ala Thr Gln Thr His Ala Ser
  733                  165                 170                 175
  735 Arg Pro Ser Arg Gln Ala Ser Gln Glu Arg Arg Arg Thr Lys Met Asn
  736                  180                 185                 190
E--> 738 Lys Cys Leu Leu Phe Glu Ala Gln Ala Pro Xaa Ser Thr Val Ser His
  739                  145
  741 Pro Lys Glu Met Thr Arg Arg Ala Ile Lys Ile Trp Ser Leu Gly Thr
  742              210
```

see
item 4 on
Error
Summary
Sheet 8/7/01

RAW SEQUENCE LISTING   DATE: 08/07/2001
PATENT APPLICATION: US/09/911,826   TIME: 13:57:00

Input Set : A:\sequence-as filed.txt
Output Set: N:\CRF3\08072001\I911826.raw

```
E--> 744 His Ile Xaa Gly Trp Trp Thr Ser Leu Pro Pro Ser Leu Pro Xaa Ser
     745 225              230               235               240
     747 Ser Met Gly Leu Leu Leu Pro Phe Phe Leu Ser Pro Leu His Val Lys
     748              245               250               255
E--> 750 Tyr Cys Glu Glu Ile Ala Leu Ala Leu Cys Arg Leu Val Ala Xaa Asn
     751              260               265               270
E--> 753 Ala Gln Pro Ser Ser Pro Xaa Ala Ala Ala Cys His Val Thr
     754              275               280               285
     757 <210> SEQ ID NO: 5
     758 <211> LENGTH: 245
     759 <212> TYPE: PRT
     760 <213> ORGANISM: Homo sapiens
     761 <400> SEQUENCE: 5
E--> 763 Leu Lys Gly Thr Lys Ala Gly Ala Pro Pro Arg Trp Arg Pro Leu Xaa
     764   1           5               10               15
E--> 766 Asn Xaa Trp Ile Pro Arg Ala Ala Gly Ile Gln Ala Val Gly Arg Met
     767              20              25               30
E--> 769 Ser Pro Leu Arg Gln Arg Ala Ala Ala Trp Cys Pro Xaa Leu Gln Arg
     770           35               40               45
E--> 772 Lys Pro Asn Leu Ser Leu Cys Leu Pro Thr Xaa Leu Xaa Arg Arg Ala
     773           50               55               60
     775 Leu Pro Arg Asp Ser Ser His Gly Arg Lys Ala Gly Thr Gly Ser Arg
     776   65               70               75               80
     778 Leu Pro His Leu Gln Ala Thr Trp Ala Ser Pro Leu Pro Ile Ser Gln
     779              85               90               95
     781 Lys Gly Leu Ala Thr Arg Pro Gly Ser Pro Arg Ile Thr Thr Trp Pro
     782           100               105               110
     784 Cys Ser Gly Pro Ala Trp Trp His Gly Pro Leu Arg Pro Arg His Arg
     785           115               120               125
     787 Ala Arg Arg Arg Leu Gln Pro Gln Pro Ala Gly Arg Arg Leu Arg Arg
     788           130               135               140
E--> 790 Ser Gly Gly Gly Arg Arg Xaa Thr Ser Val Cys Cys Leu Arg Arg Arg
     791 145               150               155               160
E--> 793 Leu Leu Asp Pro Gln Xaa Ala Thr Gln Arg Arg Ala Gln Glu Asp Val
     794              165               170               175
     796 Pro Ser Leu Gly Ala Leu Ala Arg Thr Ser Glu Asp Gly Gly Pro Val
     797              180               185               190
     799 Cys Leu Leu Pro Cys Leu Lys Ala Ala Trp Gly Phe Phe Ser Pro Ser
     800           195               200               205
E--> 802 Ser Phe Pro Leu Cys Met Xaa Asn Thr Val Lys Lys Leu Pro Trp His
     803           210               215               220
     805 Phe Ala Asp Leu Leu Leu Glu Met His Ser Pro Ala Ala Pro Glu Leu
     806 225               230               235               240
     808 Leu Pro Ala Thr Ser
     809              245
     811 <210> SEQ ID NO: 6
     813 <211> LENGTH: 266
     814 <212> TYPE: PRT
     815 <213> ORGANISM: Homo sapiens
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/911,826

DATE: [illegible]
TIME: 13:57:[illegible]

Input Set : A:\sequence-as filed.txt
Output Set: N:\CRF3\08072001\I911826.raw

```
    817 <400> SEQUENCE: 6
E--> 818 Xaa Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly Gly Arg Ser Arg
    819   1               5               [illegible]              [illegible]
    821 Thr Ser Gly Ser Pro Gly Leu Gln Glu Phe Lys Arg Trp Glu Gly Cys
    822             [illegible]              [illegible]              3
E--> 824 Leu Arg Xaa Gly Arg Glu Gln Gln His Gly Ala Arg Asp Tyr Arg Gly
    825         35              40              45
    827 Ser Gln Thr Cys Pro Tyr Ala Cys Pro His Ser Lys Asp Ala Glu His
    828     50                  55              60
    830 Tyr Gln Gly Thr His Arg Thr Glu Gly Arg Gln Val Ser Gly Ala Ala
    831  65              70              75              80
    833 Ser His Thr Ser Arg Leu Arg Gly His Pro His Cys Arg Phe Pro Arg
    834             85              90              95
    836 Arg Ala Leu Pro Pro Gly Gln Glu Ala Pro Gly Leu Gln Arg Gly Pro
    837             100             105             110
E--> 839 Ala Ala Val Pro His Gly Gly Thr Ala His Xaa Gly Pro Gly Thr Gly
    840             115             120             125
    842 Pro Asp Ala Ala Cys Ser Arg Ser Gln Pro Ala Gly Gln Gln Ala Thr
    843     130             135             140
    845 Val Ala Gln Ala Gln Arg Arg Arg Pro Thr Pro Arg Ala Leu Pro Gly
    846 145             150             155             160
    848 Ala Gly Phe Ala Gly Ala Glu Glu Asp Glu Asp Glu Gln Val Ser Ala
    849             165             170             175
E--> 851 Val Xaa Gly Ala Gly Ser Leu Ile His Ser Glu Pro Pro Lys Gly Glu
    852             180             185             190
    854 His Lys Lys Thr Ser Gln Ala Leu Glu Pro Trp His Ala His Leu Arg
    855             195             200             205
    857 Met Val Asp Gln Phe Ala Ser Phe Pro Ala Leu Lys Gln His Gly Ala
    858     210             215             220
E--> 860 Ser Ser Pro Leu Leu Pro Phe Pro Phe Ala Cys Glu Ile Leu Xaa Arg
    861 225             230             235             240
    863 Asn Cys Pro Gly Thr Leu Gln Thr Cys Cys Leu Lys Cys Thr Ala Gln
    864             245             250             255
    866 Gln Pro Leu Ser Cys Cys Leu Pro Arg His
    867             260             265
```

VERIFICATION SUMMARY   DATE: 08/07/2001
PATENT APPLICATION: US/09/911,826   TIME: 13:57:07

Input Set : **A:\sequence-as filed.txt**
Output Set: **N:\CRF3\08072001\I911826.raw**

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:406 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:1
L:738 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:4
M:340 Repeated in SeqNo=4
L:765 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:5
M:340 Repeated in SeqNo=5
L:818 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:6
M:340 Repeated in SeqNo=6
L:1035 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:15
L:1235 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:15
L:1235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15